



**KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI**  
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## **ELECTRONIC THESIS AND DISSERTATION UNSYIAH**

### **TITLE**

PROPAGASI GELOMBANG AIR MENGGUNAKAN PERSAMAAN KORTEWEQ-DE VRIES (KDV)

### **ABSTRACT**

This research aims to determine the profile of propagation of water waves and its elevation in a simulated wave tank by using KdV equation. Finite difference method was used to solve its numerical scheme and observe the behavior of water waves. In this study, it is also modeled generation of water waves as wave tank in Hydrodynamics laboratory by using Matlab to construct and observe the process of its propagation. The result indicates that the water surface is flat before it was given disturbance. After being given disturbance in wave generator with frequency 0.5 Hz, there are collisions among water particles so that they appear in distorted position which will make the water surface elevate at some points along the x. Propagation of water waves along the x position indicates that the greater the elevation of water waves with increasing simulation time.